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CYBER SECURITY
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SECURITY AWARENESS

Michael Roling
Chief Information Security Officer
State of Missouri

WHO AM I?

- Chief Information Security Officer
- Lead the Information Security Management Office (ISMO)
- Tackle the State's most pressing information security issues
- Focus has primarily been securing the State's web presence



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SECURITY AWARENESS

- Many different approaches and frameworks to security awareness
 - From non-technical
 - End user education
 - Outreach, promotional activities
 - To the hardcore technical
 - Network sensors
 - Endpoint protection and monitoring



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BACK TO THE BASICS

- What means the most to your organization?
- How do you secure what you do not manage?
- What about the end user?
- How can technology save us?



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WHAT MEANS THE MOST?



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WHAT MEANS THE MOST?

- Identify the risk (potential loss) of your known assets
- Are you treating all assets the same? (because you shouldn't)
- Can the public reach your key assets?



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CAN YOU SECURE WHAT YOU DO NOT MANAGE?

- Do you have an inventory of your infrastructure?
 - Servers, workstations, mainframes, laptops, software, copiers, VOIP devices
 - People
 - Policies



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CAN YOU SECURE WHAT YOU DO NOT MANAGE?

- Do you have an inventory of your data?
 - Are you sure you know all of the data that flows in and out of your organization?
- Network inventory straightforward, but how do you inventory data?



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CAN YOU SECURE WHAT YOU DO NOT MANAGE?

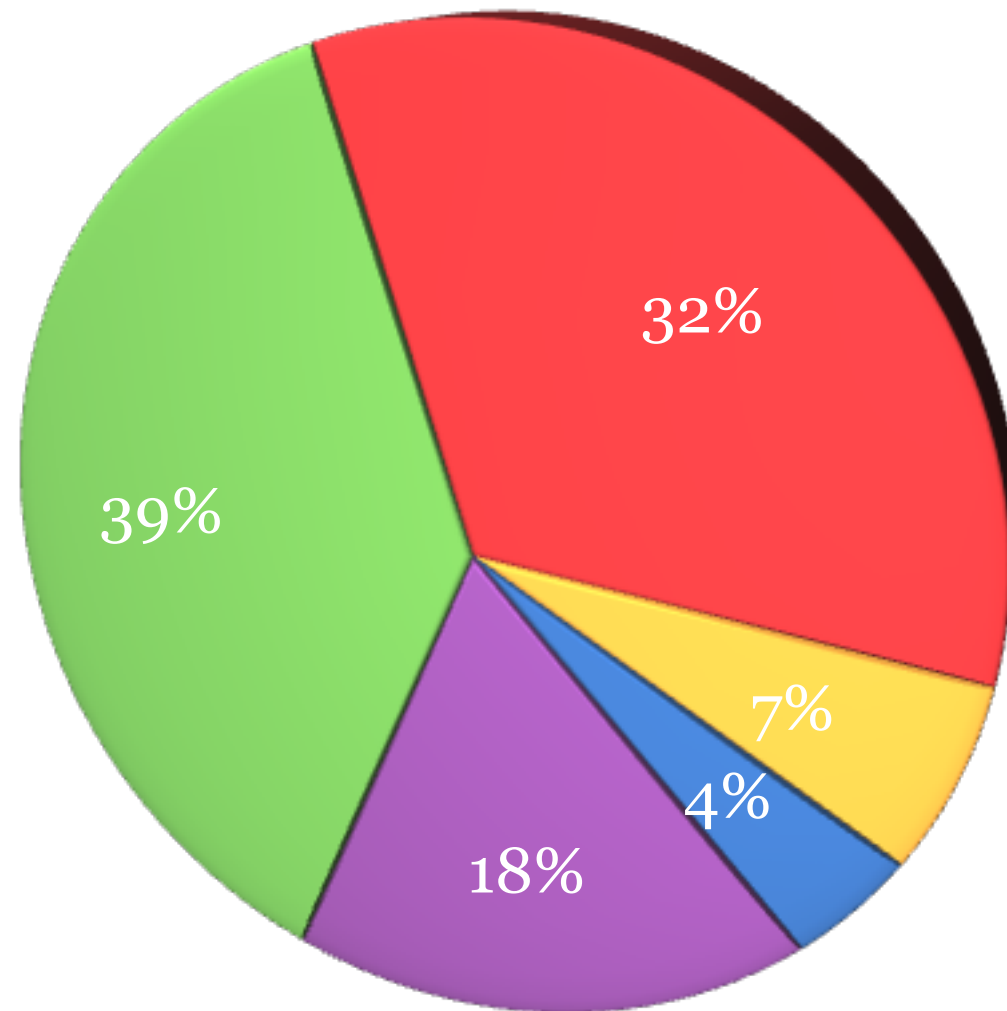
- What about your developers?
 - Who's managing their skill set?
- What you don't know might make its way into tomorrow's newspaper



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CAN YOU SECURE WHAT YOU DO NOT MANAGE?

● XSS ● Information Leakage ● SQLi ● Transport Layer ● Other



Source: Web Application Security Consortium
Web Application Security Statistics
<http://projects.webappsec.org/Web-Application-Security-Statistics>



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THE END USER?

(AKA YOUR LAST LINE OF DEFENSE)

- The end user is your most critical information security asset
 - Education, education, education
- No technology can prevent a well crafted social engineering attack, but people can



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CAN TECHNOLOGY SAVE YOU?

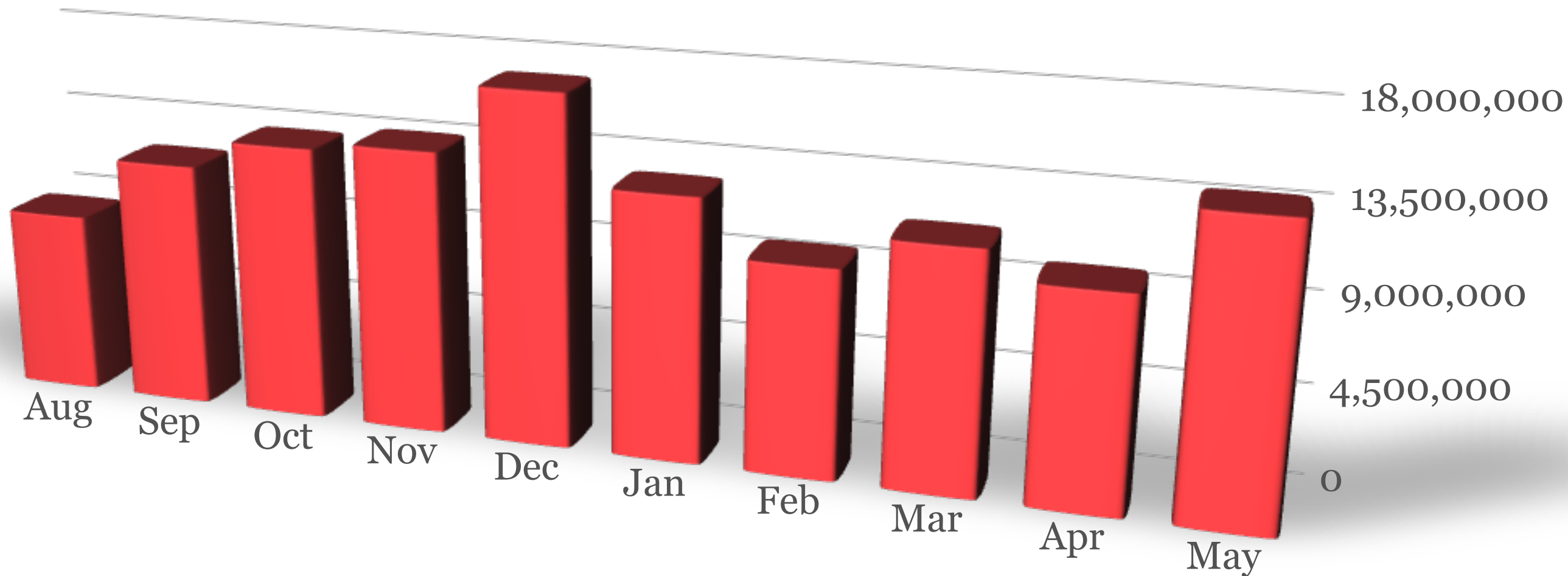
- The short answer is no
 - Technology, while appearing sophisticated, actually is quite dumb
 - Signature based rules will always be defeated
 - Zero day malware will always exist
- It isn't worthless, by any means



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CAN TECHNOLOGY SAVE YOU?

■ 126.8 Million Attacks Caught by State IPS since August 2009



Source: Missouri Information Security Management Office
August 2009 through May 2010



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CAN TECHNOLOGY SAVE YOU?

- Technology can:
 - Assist in inventorying devices on the network
 - Vulnerability assessments
 - Discover unknown data sources
 - Try to block and prevent attacks, host and network based
 - Encryption



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IN SUMMARY...

- Identify the risk within your organization
- Reach out and discover what resides on your network and the data that flows through it
- Don't discount the end user, they are your last line of defense in many attacks
- Apply technology where needed, but don't rely solely on it



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QUESTIONS?

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